

# REPORT ON MACHINERY

No. 1672

Received at London Office

1918

of writing Report *Nov 21/18* When handed in at Local Office *Nov 21/18* Port of *Newport News Va*  
 in Survey held at *Newport News Va* Date, First Survey *Aug 23<sup>rd</sup>* Last Survey *Nov 16<sup>th</sup> 1918*  
 g. Book. *STEEL S.S. "AGWIDALE"* (Number of Visits *47*)  
 EN on the *STEEL S.S. "AGWIDALE"*

Master *✓* Built at *Newport News Va* By whom built *Newport News S.S. & C.* Tons *Gross 5580 Net 3678* When built *1918-11*

Engines made at *Newport News* By whom made *Newport News S.S. & C.* when made *1918-11*

Boilers made at *Newport News* By whom made *Newport News S.S. & C.* when made *1918-11*

Registered Horse Power *471* Owners *Atlantic Gulf & West India S.S. Co. (U.S. Shipping Board E.F. Corp.)* Port belonging to *Newport News*

Net Horse Power as per Section 28 *471* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *yes*

ENGINES, &c.—Description of Engines *Steam Triple Expansion* No. of Cylinders *3* No. of Cranks *3*  
 Dia. of Cylinders *24 1/2 41 1/2 72* Length of Stroke *48* Revs. per minute *70* Dia. of Screw shaft *as per rule 14 1/4* Material of screw shaft *CHS.*

the screw shaft fitted with a continuous liner the whole length of the stern tube *yes* Is the after end of the liner made water tight

the propeller boss *yes* If the liner is in more than one length are the joints burned *yes* If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *✓* If two

boilers are fitted, is the shaft lapped or protected between the liners *yes* Length of stern bush *60"*

Dia. of Tunnel shaft *as per rule 12 9/16* Dia. of Crank shaft journals *as per rule 13 5/16* Dia. of Crank pin *14 3/8* Size of Crank webs *9 1/2* Dia. of thrust shaft under

boilers *14* Dia. of screw *16 9/16* Pitch of Screw *16 9/16* No. of Blades *4* State whether moveable *no* Total surface *92.3*

No. of Feed pumps *2* Diameter of ditto *4"* Stroke *21"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* Diameter of ditto *5"* Stroke *21"* Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *2* Sizes of Pumps *10x12x12 9x6x10* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *Two 3 1/2"* Tunnel *1-3 1/2"* In Holds, &c. *#1 Hold:- Two 3 1/2"* #2 Hold:- *Two 3 1/2"* #3 Hold:- *Two 3 1/2"* #4 Hold:- *Two 3 1/2"* D.T.:- *Two 3 1/2"*

No. of Bilge Injections *1* sizes *9"* Connected to condenser, &c. to circulating pump *yes* Is a separate Donkey Suction fitted in Engine room & size *yes 3 1/2"*

Are all the bilge suction pipes fitted with roses *yes* Are the roses in Engine room always accessible *yes* Are the sluices on Engine room bulkheads always accessible *yes*

Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *Valves*

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *yes* Are the Discharge Pipes above or below *yes* deep water line *yes*

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel *yes* Are the Blow Off Cocks fitted with a spigot and brass covering plate *yes*

What pipes are carried through the bunkers *none* How are they protected *✓*

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *yes*

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *yes*

Is the Screw Shaft Tunnel watertight *yes* Is it fitted with a watertight door *yes* worked from *U.I.K.*

OILERS, &c.—(Letter for record *S.*) Manufacturers of Steel *LUKENS I & S Co.*

Total Heating Surface of Boilers *6564* Is Forced Draft fitted *yes* No. and Description of Boilers *Two: Scotch: S.E.*

Working Pressure *190* Tested by hydraulic pressure to *285* Date of test *Aug. 8<sup>th</sup> 1915* No. of Certificate *194-195*

Can each boiler be worked separately *yes* Area of fire grate in each boiler *OL FUEL* No. and Description of Safety Valves to

each boiler *Two: Spring: 3 1/2"* Area of each valve *9.62* Pressure to which they are adjusted *190* Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *18"* Mean dia. of boilers *16 1/6"* Length *11.6"* Material of shell plates *S.*

Thickness *1 3/4"* Range of tensile strength *60000-76800* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *D.R.L.*

long. seams *D.B.S.T.* Diameter of rivet holes in long. seams *1 9/16"* Pitch of rivets *8.34* Top of plates on width of butt straps *23"*

Per centages of strength of longitudinal joint *103.6* Working pressure of shell by rules *203* Size of manhole in shell *16 x 12"*

Size of compensating ring *39 x 35* No. and Description of Furnaces in each boiler *4: Morrison* Material *S.* Outside diameter *47 3/16*

Length of plain part *top 19 bottom 32* Thickness of plates *top 19 bottom 32* Description of longitudinal joint *Weld* No. of strengthening rings *✓*

Working pressure of furnace by the rules *200* Combustion chamber plates: Material *S.* Thickness: Sides *9/16* Back *5/8* Top *5/8 + 7/16* Bottom *7/8*

Pitch of stays to ditto: Sides *7 x 7* Back *7/4 x 7* Top *8 x 7* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *197*

Material of stays *S.* Area at smallest part *1.47* Area supported by each stay *56* Working pressure by rules *210* End plates in steam space:

Material *S.* Thickness *1 1/16* Pitch of stays *16 x 16* How are stays secured *D.N.* Working pressure by rules *197.5* Material of stays *S.*

Area at smallest part *2 3/4* Area supported by each stay *256* Working pressure by rules *241* Material of Front plates at bottom *S.*

Thickness *3/4* Material of Lower back plate *S.* Thickness *3/4* Greatest pitch of stays *12 1/2"* Working pressure of plate by rules *280*

Diameter of tubes *2 3/4* Pitch of tubes *4 x 3 3/4* Material of tube plates *S.* Thickness: Front *3/4* Back *3/4* Mean pitch of stays *12 x 7 1/2*

Pitch across wide water spaces *12 3/4* Working pressures by rules *279* Girders to Chamber tops: Material *S.* Depth and

thickness of girder at centre *Two: 10 x 3 3/4* Length as per rule *34* Distance apart *8 1/4* Number and pitch of stays in each *4:- 7"*

Working pressure by rules *210* Steam dome: description of joint to shell *✓* % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type *✓* Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

Exhaust stops, Valve rods, Top and bottom end brackets and bolts, Main bearing bolts, Side coupling bolts & Piston rings, & Check valves & etc. Complete for main boiler, Sea, bilge & air pump valve, Piston tubes, Condenser tubes, Nuts, bolts & more of various sizes.

The foregoing is a correct description,

Newport News Shipbuilding & Dry Dock Co.,

By

Manufacturer.

Dates of Survey while building

During progress of work in shops --  
During erection on board vessel --  
Total No. of visits

J. 23. F. 14. M. 8. 9. 26. A. 9. 23. M. 13. 17. 22. 24. 27. 31. J. 5. 14. 19. 24. 27. J. 10. 11. 16. 22. 27. A. 8. 10. 13. 15. 24. S. 5. 16. 18. 21. 27. O. 4. 8. 9. 18. 16. 21. O. 30. N. 1. 2. 9. 13. 14. 15. 16. 47

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders M. 27. J. 19 Slides J. 10 Covers S. 5. 18 Pistons O. 16 Rods S. 5. 18

Connecting rods O. 4 Crank shaft O. 18 Thrust shaft O. 18 Tunnel shafts A. 24 Screw shaft A. 24 Propeller N. 1

Stern tube A. 13 Steam pipes tested O. 30. N. 2 Engine and boiler seatings O. 4 Engines holding down bolts N. 9

Completion of pumping arrangements N. 13. 14. 15 Boilers fixed N. 9. Engines tried under steam N. 9.

Completion of fitting sea connections SEP 5<sup>th</sup> Stern tube SEP 5<sup>th</sup> Screw shaft and propeller Nov. 1.

Main boiler safety valves adjusted N. 9<sup>th</sup> Thickness of adjusting washers LOCK NUTS.

Material of Crank shaft O.H.S. Identification Mark on Do. M. 18. 10. 18 Material of Thrust shaft O.H.S. Identification Mark on Do. M. 18.

Material of Tunnel shafts O.H.S. Identification Marks on Do. SEP 24. 18 Material of Screw shafts O.H.S. Identification Marks on Do. SEP 24.

Material of Steam Pipes COPPER & STEEL Test pressure 400 lb. & 600 lb.

Is an installation fitted for burning oil fuel yls. Is the flash point of the oil to be used over 150° F. yls.

Have the requirements of Section 49 of the Rules been complied with yls.

Is this machinery duplicate of a previous case yls. If so, state name of vessel S.S. "MININDIES", S.S. "MINAIRES"

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery has been

built under special survey in accordance with the appropriate

plans and Rules for the R.C. & L.M.C.

The workmanship and materials are good and the engines

work well, rendering the vessel eligible, in my opinion, to

have the record of L.M.C. 11.18 M.B. 190 lb. I.B. 130 lb.

"Fitted for oil fuel F.T. above 150° F."

The furnaces of main boilers burn oil fuel. The oil is carried

in the double bottom and side bunker tanks; supplied by

special fuel pump in stokehold to the burners, and is

atomised by mechanical burners.

The requirements of Sec. 49 of the Rules have been

complied with.

The amount of Entry Fee

\$ 15.00

When applied for,

Special

\$ 218.00

19. 11. 18

Donkey Boiler Fee

£

When received,

Travelling Expenses (if any) £

£

22. 11. 18

Wm H. Depressden

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NOV 26 1918

Assigned

+ L.M.C. 11.18

Fitted for oil fuel 11.18 S.P. above 150° F.

MACHINERY CERTIFICATE  
WRITTEN, 16. 12. 18



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Foundation